

WFCS FIRE CHEMICALS CLASSIFICATIONS (September 2003)

8402

LONG-TERM FIRE RETARDANTS (September 2003)

8402.1

Long-term retardants contain water, a gum thickener, a coloring agent, and retardant salts (typically fertilizers). The salts alter the way the fire burns, decreasing the fire intensity and slowing the advance of the fire, even after the water they originally contained has evaporated. They continue to work until they are removed by rain or erosion.

The water they contain serves primarily to aid in uniform dispersal of the chemical over the target area. The gum thickener holds the retardant drop together as it drops through the air, improving drop accuracy. The coloring agent makes the retardant visible to pilots and to firefighters on the ground.

Retardants can be supplied as wet or dry concentrates to be prepared at a tanker base to produce mixed retardant that is unthickened or low, medium, or high-viscosity, gum-thickened when mixed with water for use.

CLASS A FIRE SUPPRESSANT FOAM (September 2003)

8402.2

Class A fire suppressant foam includes two sub-categories: foaming agents and wetting agents.

Foaming agents affect the accuracy of an aerial drop, how fast the water drains from the foam, and how well the product clings to the fuel surfaces.

Wetting agents increase the ability of the drained water to penetrate fuels.

Appropriate selection of concentrate dilution and application equipment will yield a range of suppressants from wetting agent for mop-up through fluid foam for wet line to dry foam for exposure protection.

Class A fire suppressant foams depend on the water that they contain to suppress the fire, and are supplied as wet concentrates.

FIRE SUPPRESSANT WATER ADDITIVES

8402.3

(September 2003)

Fire suppressant water additives, formerly known as “short-term fire retardants”, contain ingredients designed to alter the physical characteristics of water to increase effectiveness, accuracy of the drop, or adhesion to fuels. They also improve the ability of water to cling to vertical and smooth surfaces. They depend on the water that they contain to suppress the fire. They may be supplied as wet or dry concentrates. Fire suppressant water additives include two sub-categories: Elastomers and Gels.

Fire suppressant elastomers contain polymers that produce a fire suppressant that has a high elasticity and a relatively low viscosity when added to water. The elastomers improve the ability of water to cling to vertical and smooth surfaces. They are generally wet concentrates.

Fire suppressant gels are nearly the opposite of the elastomers, in that they produce a fire suppressant that has high viscosity and low elasticity when added to water. The gels also improve the ability of water to cling to vertical and smooth surfaces. They are generally dry concentrates.

[\(see next section\)](#)

[\(see HB Table of Contents\)](#)

[\(see Forms or Forms Samples\)](#)